

Title Slide: NIH Dissemination and Implementation Research...at the Crossroads...

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March 19, 2012

Slide 1: Annual D and I Meetings

“State of the Science” Venue

- First meeting: September 2007: “Showcase”, ~350 participants
- Second meeting: “Building Capacity”, January 2009, 500 registrants
- Third meeting: “Methods and measures,” March 2010, 900 registrants
- Fourth meeting: “Policy and Practice,” March 2011, 1200 registrants
- Fifth meeting: “D and I at the crossroads,” March 2012, 1200 registrants

Slide 2: Challenging Assumptions

No text.

Slide 3: Valuing Consistency

[Image] The phases of intervention development and implementation are displayed across the top with arrows showing the direction from: (1) ITV development; (2) Efficacy; (3) Effectiveness; (4) Implementation. Under each phase there are two identical figures titled site 1, site 2, site 3, and site 4 separated by a line running across. The figure has a large circle, titled Intervention X, with a smaller circle, titled Evidence, within it.

Slide 4 (IMAGE)

Slide 5 “Voltage Drop” of an intervention as it moves through stages of development

[Image] A graph. The X axis is “Time” with three points, (1) Efficacy Trial; (2) Effectiveness Trial; and (3) D&I Trial. The y axis is measuring Expected Effect. At Efficacy trial the graphical point is high on expected effect, but drops off in an inverse relationship line as time progress and at D&I trial, the expected effect is low. Between each time point, arrows showing impact and relevance diminishing from the intervention. [End Image]

Slide 6: “Program Drift” of a fielded intervention (ITV) over time, with expected decrease of effect

[Image] Graph. X- axis is Time, with four points (I0, I1, I2, I3). Y-axis is ITV effect. At I0, the effect is high. A dotted line connects straight across to I3 and remains high, this is marked “Optimal Effect”, a second line is drawn from I0 and it goes down diagonally, labeled “Unintentional Effect”, and the point gets bigger showing a change in the intervention and a decline in ITV effect. This larger point is titled “Expected Effect.” The difference between the points for “Optimal Effect” and “Expected Effect” is labeled “Program Drift.” [End Image].

Slide 7: Emphasizing Multi-level, Multi-Domain Change

[Animated Image] Three concentric circles. The smallest circle is Evidence; circle 2 is labeled Intervention, and circle 3 is labeled Cost. On first click, circle 1, evidence, gets a little bigger, on second click, circle 2, Intervention, gets a little bigger, and on click 3, circle 3, Context, gets a little bigger. Off to the side, are listed the changes that are occurring:

- Evidentiary Changes
- Environmental Changes

- Practice Changes
- Personnel Changes
- Knowledge Changes
- System Changes
- Policy Changes

Chambers, Glasgow, Stange, 2012, In Preparation

Slide 8: Sustainability in a Dynamic Context

[Image] A series of four images showing an intervention trying to fit into a bucket labeled “Context.” The shape of the “Intervention” and Context change slightly as you move left to right and when you reach the final image, the intervention fits nicely in the context bucket. Between each image is a PDSA cycle. At the top, there is an arrow going left to right and labeled “Intervention Adapted Over Time To Improve and Sustain Outcomes.” On the bottom, there is a bar showing increasing public health outcomes and expected benefit over time as you move left to right. Everything is shown with internal and external context: Environmental Changes; Practice Changes; Personnel Changes; Knowledge Changes; System Changes; Policy Changes [End Image]

Chambers, Glasgow, Stange (2012), Sustainability: It’s a Dynamic World Out There. In Preparation

Slide 9: Funding Opportunities

No text.

Slide 10: The Current Trans-NIH PARs

PAR-10-038; 10-039;10-040

NIMH, NCI, NIDA, NIAAA, NIAID, NHLBI, NINR, NIDDK, NINDS, NIDCD, NIDCR, NCCAM, FIC, OBSSR

2010 CSR standing review committee

Every round Submission (typically 50-60 apps/round)

Slide 11: The DIRH Standing Review Committee

“The (DIRH) Study Section reviews applications intending to bridge gaps between public health, clinical research, and everyday practice. The focus of the studies reviewed is on the transmission and implementation of knowledge from scientific discovery to transform healthcare delivery, improve health outcomes, and manage acute and chronic illness.

SRO: Jacinta Bronte-Tinkew, Ph.D.

http://www.csr.nih.gov/Roster_proto/sectionI_list_detail.asp?NEWSRG=DIRH&SRG=DIRH&SRGDIPLAY=DIRH (ROSTER)

Any reviewers in the audience?

Slide 12: Key D&I Research opportunities

Strategies to improve sustainability

Studies of mature implementation sites to look at sustainability/evolution

Implementation in the context of a learning HC organization

Implementation as an ongoing process (is it ever complete?)

When is de-implementation warranted? How can ineffective practices be stopped?

Slide 13: Additional FOAs

NHLBI: PAR-12-063: Research Dissemination and Implementation Grants (R18)

NIMH: RFAs-MH-13-060, 061: Harnessing Advanced Health Technologies to Drive Mental Health Improvement

AHRQ/PCORI: RFA-HS-12-006: Patient Centered Outcomes Research-Dissemination by Health Professionals Associations (R18)
NIH(Common Fund): RFAs-RM-12-002: Health Care Systems Research Collaboratory-Pragmatic Clinical Trials Demonstration Projects (UH2/UH3)
OBSSR-led: PA-12-024: Behavioral Interventions to Address Multiple Chronic Health Conditions in Primary Care (R01)

NIDDK: RFA-DK-10-009: NIDDK Centers for Diabetes Translation Research (P30) (expired)

Slide 14: Other D&I Opportunities

PCORI (www.pcori.org/funding-opportunities)

NIH NCATSL: RFI: Enhancing the CTSA Program

<http://grants1.nih.gov/grants/guide/notice-files/NOT-TR-12-003.html>)

VA HSR&D (<http://www.hsr.d.research.va.gov/funding/>)

AHRQ (<http://www.ahrq.gov/fund/>)

Foundation Initiatives (e.g. WT Grant, RWJ)

International Efforts (e.g. FIC, NIAID, CIHR, WHO, PEPFAR, USAID)

CMS: Center for Medicare & Medicaid Innovation Program (CMMI)

NIMHD Summit on Health Disparities Conference: Integrating Science, Practice, and Policy, Oct 31-Nov 3, 2012

Slide 15: Thanks!

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And now over to Russ...

Slide 16: Title Slide: Crossroads: Looking Back, Projecting Ahead

Russ Glasgow, Deputy Director, Implementation Science

Division of Cancer Control and Population Sciences

National Cancer Institute

5th Annual NIH Annual Conference on the Science of Dissemination and Implementation Research
March 19, 2012

[Image] Street post sign with one arm titled "Future", one as "Past," and a third as "Present" [End Image]

Slide 17: Top 10 Key D & I Research Accomplishments

10. NIH Annual D & I Research Conference, permanent DIHR study section, and emerging training options
9. eHealth, mHealth applications: enhancing reach to those in need
8. Diabetes Prevention Program—YMCA community translation
7. International models—KT and importance of context and policy
6. WHO, CONSORT (pragmatic trials), and IOM (childhood obesity) adoption

Slide 18: Top 10 Key D & I Accomplishments (cont.)

5. Chronic Care Model and Chronic Disease Self-Management programs
4. CBPR demonstrations and acceptance
3. HIV AIDS interventions—especially in low/moderate income countries
2. VA QUERI and rapid learning system changes
1. Lessons from the tobacco wars—natural experiments and policy, brief interventions

Slide 29: Proliferation of D&I Models—61 and Counting?

Key Common Points:

- Context is critical
- Begin with stakeholders—take their perspective
- Design for dissemination—from beginning
- Need balance between fidelity to EB program and adaptation to local setting

Slide 20: Key Common Points (cont.)

- There is more than evidence needed for successful adoption, implementation, and sustainability
- Implementation science is a multi-level, multi-component, and multi-stakeholder affair
- D & I science is complex—and about “fit” and interaction effects
- Select the DESIGN and the MODEL that best fits your question—less important WHICH model than that you use it well

Slide 21: The Road Ahead

[Image] Shadows of people standing before a road [End Image]

Slide 22: Challenges on the Road Ahead

- Rapid and practical results
- Culture change: impacting basic science industrial complex, review system
- Making “best bets” on emerging approaches and technologies—e.g., big data; modeling; mHealth
- Demonstrating value—e.g., cost; cost-effectiveness; ROI
- Reducing impact of health inequities, including low literacy/numeracy

Slide 23: Implementation Science Opportunities

- Pragmatic Trials*
- Simulation Modeling
- Economic Analyses
- Scale-up and Sustainability
- Global health
- Public Health Genomics
- CTSAs
- Comparative Effectiveness Research- Translation(CER-T) and PCORI
- Harmonization of Measures

*Thorpe et al. A pragmatic-explanatory continuum indicator summary (PRECIS): a tool to help trial designers. CMAJ 2009;180(10):E47-#57.

Slide 24: Types of D & I Evidence Needed: 2R's and “RCCT”

- Relevant
- Rigorous and
- Rapid*
- Cost
- Convergent*
- Transparent

Glasgow R, *Annals of Behavioral Medicine*, 2008, 35: 19-25.

Glasgow R, Chambers D. *Clinical and Translational Science*, in press, 2012

Slide 25: How to Evaluate Technologies that Outpace Usual Research Timelines?

[Image]

A figure showing how standard grants are outpaced by technology.

A timeline going from 2005 to 2011. On the top, is a series of boxes showing at what point major technology innovations occurred: YouTube (2005); iPhone (2007); Android (2008); iPad (2010).

On the bottom, is a series of boxes showing the key events of a grant: Grant Submit and Award (2005); Development and Pilot Testing (2006-2007); Recruit and Randomize (2008-2009); Follow-ups (2009-2010); Analyze and Publish (2011).

William Riley, NHLBI

Slide 26: Convergent Evidence

- Much to learn from well-conducted *observational studies*
- Great potential for *simulation modeling*—especially regarding interactions and unintended consequences^{1,2}
- *Evaluability*³—aka initial “sniff test”
- *Qualitative* and mixed methods⁴
- Practice-based evidence on *efficiency and feasibility*
- Combine with *experimental* data
- Emphasis on *replication and consistency*

¹ Stern M, Williams K, Eddy D, Kahn R. Diabetes Care. 2008 Aug;31(8):1670-1.

² Mabry P. Am J Prev Med. 2011 May; 40 (5 Suppl 2):S159-61

³ Leviton L. Ann Rev Public Health, 2010; 3:213-233.

⁴ Creswell J, Klassen A, Plano-Clark V, Smith, LC. 2011, NIH-OBSSR. Mixed Methods: http://obssr.od.nih.gov/scientific_areas/methodology/mixed_methods_research/pdf/Best_Practices_for_Mixed_Methods_Research.pdf

Slide 27: Resources for the Road Ahead

[Image] Winding road going off into the mountains [End Image].

Slide 28: Evidence Integration Triangle (EIT)

[Image] Intervention (Program/Policy) (e.g. design; key components; principles guidebook; internal and external validity) has a bi-directional connection to "Practical Progress Measures (e.g. actionable & longitudinal measures)". "Practical Progress Measures" has bi-directional connection to "Participatory Implementation Process" (e.g. stakeholder engagement; team-based science; CBPR; patient centered care). "Implementation Process" has a bi-directional connection to "Intervention (Program/Policy)". Each bi-directional arrow displays the word “Feedback” above it. This completes the circular connection from "Intervention (Program/Policy)" to "Practical Progress Measures" to "Implementation Process" back to "Intervention (Program/Policy)". Two ovals with the words, "Evidence and Stakeholders" are in the middle of the triangle. A circle encompasses the whole triangle and lists the six Multi-level contexts: (1) Intrapersonal/biological; (2) Interpersonal/Family; (3) Organizational; (4) Policy; (5) Community/Economic; (6) Social/Environment/History.[End Image]

Glasgow, R, Green, Taylor, Stange, Am J Prev Med, in press

Slide 29: EIT Conclusions

- The evidence-based movement is a good start, but only gets us so far

- To make greater progress, two other elements also need attention:
 - Practical MEASURES to track progress, and
 - Implementation PROCESSES that use partnership principles.
 - These 3 legs of the “EIT” are each necessary but not sufficient by themselves.

<http://cancercontrol-dev.cancer.gov/IS/presentations/>

Slide 30: D & I Science Resources

- New Compendium of D & I Research—
D & I Health Research. R. Brownson, G. Colditz, E. Proctor (Eds). Oxford University Press, 2012
- Websites and other virtual resources supporting D & I, including:
 - Cancer Control P.L.A.N.E.T. (ccplanet.cancer.gov),
 - Research to Reality (R2R) (researchtoreality.cancer.gov)
 - AHRQ
 - VA QUERI and CIPRS
 - KT Canada (ktclearinghouse.ca/ktcanada)
- *D & I Health* e-newsletter - contact wynne.norton@gmail.com

Slide 31: Dissemination and Implementation Measures and Methods Initiative

[Image] Screenshot of GEM D&I Workspace [End Image].

- <https://www.gem-beta.org/> (GEM Homepage)
- <http://cancercontrol.cancer.gov/IS/resources.html>
(IS Team Website)

[Images] Logos for NCI, NIH, HHS, Cancer Communication Research Center, and CECCR [End Images]

Slide 32: Join the Initiative! Where and How

[Image] “GEM D&I Workspace (Measures -<https://www.gem-beta.org/>)” has a bi-directional connection to “Implementation Science Website (Methods - <http://cancercontrol.cancer.gov/IS/resources.html>)”. “Implementation Science Website” has bi-directional connection to “R2R Community of Practice (Discussion - <http://researchtoreality.cancer.gov>).” “R2R Community of Practice” has a bi-directional connection to “GEM D&I Workspace (Measures).” This completes the circular connection from “GEM D&I Workspace” to “Implementation Science Website” to “R2R Community of Practice” back to “GEM D&I Workspace”. [End Image]

- Visit the D&I GEM Workspace <https://www.gem-beta.org/> and review, comment on, and rate existing D&I measures and constructs, and add additional ones.
- Review the D&I methods tables (<http://cancercontrol.cancer.gov/IS/resources.html>) and join the discussion on the Research to Reality (<http://researchtoreality.cancer.gov>) community of practice on these approaches to provide feedback and share your experiences.

Slide 33: Learn More

Watch a Prezi Presentation on how to engage and become a D&I Champion on the workspace <https://www.gem-beta.org/public/wsoverview.aspx?wid=11&cat=8>

Slide 34: Questions? We’re all ears....

[Image] Two cats in costume with big ears [End Image]